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## WAYS OF THE BLACK SKIMMER

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Nearly everyone within the range of the Black Skimmer (*Rynchops nigra nigra*) is familiar with it by one name or other, and many of these names refer to its habit of skimming for food. Champlain, in 1605<sup>1</sup>, noticed this species, and described it unmistakably. Since then many others have added various facts, but since it is not possible to tell everything about any one species, this account may perhaps add a little or present old information in a different light.

The place of the observations recorded here is about the entrance of the Savannah River, and the nesting places are on Oysterbed Island, in Georgia, and the Long Island Fill, mostly in South Carolina. The elevation runs up to twenty-two feet above low water, but a tidal rise of six to nine feet makes much of this area untenable for skimmer nests. The colony sites of one year are often abandoned the next, due to the encroaching grass or shrubs, as the skimmers, with their long wings and light bodies do not maneuver well around vegetation. The dredges that pump sand from the neighboring river, furnish new and clear nesting grounds every year or so.

My acquaintance with nesting skimmers extends somewhat casually over portions of ten summers, but the best chance for observation came in 1932, when my floating home was near the Long Island Fill from June 29 till fall. At one time our pipeline went directly through a colony, but with care in laying the line very little damage resulted, and that little arose more from the shyness of certain individuals, than from actual physical disturbance.

No hawks remain in this section during the summer, except a red-tail on Turtle Island, about three miles to the northward, and the Fish Crows that damage the earlier nesting birds, are separated into pairs, and stay close to their own nests through June and July, and so are not much of a menace. But the sudden rain squalls of summer are the worst destroyers of the skimmer nests. A half hour of hard rain will wash away the easily eroded sand, and bury and scatter eggs

everywhere. Some female skimmer with a good sense of location may scratch out the sand from around her clutch, if they are not scattered, but most of the parents will leave the place, and lay another set some days later. When the first hard gusts of wind before the storm blow tiny grains of sand over the grounds, the nesting birds rise like one into the air, there to circle madly for a few minutes, then settle again on the eggs if the wind is not too strong. So the nesting time is extended from the last of May until almost September.

Some earlier writers have said that these birds make their nests by squatting on the sand, turning round, and boring with their bodies.<sup>2</sup> This does not seem like a careful statement from anyone who has handled many breeding birds, and seen the unbroken and immaculate feathers of the breast. I have seen many birds settle into the nest hollows even after incubation is well advanced, and kick backward to remove sand, then sink into the hollow to see how well it fitted. The skimmer usually faces into the wind, and its folded wings and tail make a wind-vane of it, and perhaps the roundness of the nest is due to the fact that the wind goes around the compass at least once every twenty-four hours, on most summer days. The nest hollows always show the scratchings of tiny feet unless a breeze has smoothed out the marks, and not the revolutions of an animated feather duster.

My blind, made of a couple of crocus bags, was in the middle of a small colony, and I prepared a few gauze swabs smeared with prussian blue. These were placed in certain nests, and I retired into the blind. Two birds went at once to their nests, resting against the swabs, and marking their breasts with blue smears. But one was too shy, and would not go into the nest. Another tugged and pulled at the swab, trying to remove it. At each tug her mate would swoop down, and together they zoomed fifty feet into the air, to return almost at once. It was evident he believed that she was about to harm the eggs. In a few minutes I removed the swabs, put numbered sticks by the nests, and then had a chance to register the comings and goings of each incubating bird so marked. Though I was in the blind on several successive days, at no time did any other than the marked birds return to these nests, and as one nest had eggs laid in it during these days, it seems that the females must do all the incubating. One day after scaring them all off the nests, I swapped two sets of eggs (four in one case, five in the other) from birds that were differently marked. In less than five minutes after going into the blind, both birds returned and at once settled on their nests—and their neighbor's eggs. In the colony was one Least Tern, and the bird did not return so quickly to



FIG. 10. 1. Oysterbed Island, in June. 2. A nest with five eggs. 3. The chick is about four days old. 4. The hiding pose. 5 and 6. Nearly ready to fly.

the nest as did the skimmers, and always had to run a gauntlet of lunges and jabs from the birds already settled on the nests. They even did not seem to trust their own kind too close to the nesting territory.

The young birds hatched a day or so apart, showing that incubation started when the first egg was laid, as indeed must have been necessary, with that hot sun beating down on the sand. The old birds fed the young directly so far as I could see, but the adults, like the hawks, owls, and the gulls, regurgitate the scales and indigestible matter from their own food,<sup>3</sup> and the young chicks picking at it might have easily appeared like being fed by regurgitation. Often a young bird too small to run from the nest would have the tail of a small fish sticking out of its mouth. And the adults are to be seen coming to the colony with fish or shrimp crosswise in the bill soon after the first eggs are laid.

The common shrimp, *Penaeus*, is often found on the ground near the nests where it has mummified after being refused or dropped. Small mullet and menhaden are also brought in, and once I found an eight inch long garfish discarded among the nests. If a young bird but little over four inches long, tried to swallow head first this garfish, with a head about one-third its length, it might be hard to get much nourishment from it.

When the birds are about a week old they leave the nest to run about, and down below high watermark where the sand is moist and cool, each scratches a hollow just right to lie in. Their feet are nearly as large as those of the parents, and of several hundred which I banded, none showed any discomfort later from too loose bands. It became very common to catch a youngster and find a band placed three weeks before. At about five weeks old they begin to fly, to develop the longer, horny sheath to the lower bill, and then they begin to show the reddish color on the bill, and to display a voice, as plainly juvenile as is that of a young crow. In May, 1933, one of those swooping over a proposed nesting site had a trace of immaturity in its voice.

No one seems to have recorded the fact that some skimmers remain in winter plumage, with a white band or spot on the hind neck, throughout the summer, and do not frequent the breeding grounds. Presumably these are non-breeders.

The "skimming" way of feeding is the only one I have ever observed, and though many hours have been spent watching them, I have never seen one actually catch a fish that way. I have seen a piece of drift sedge the size of a lead pencil carried many feet into the air,

and dropped. And when the tide is low, and the area of shallow water over the mudflats distant and small, there has been a regular procession of skimmers going out and others returning with food. The skimming activities are greater at dusk and at low tide, while the hoarse notes can be heard all night as they come and go overhead. One night in November we went back to a small pond, teeming with mummichogs, to find a lone skimmer swinging across and back in the moonlight. When skimming the wing beat is quickened and shortened, with the motion mostly in the "hand" of the wing, and the long "fore-arm" taking small part in the beat, except to keep the wing high above the water. The bill opening is increased through the elastic hinge of the forehead, which allows the lower bill to be carried more nearly parallel to the water surface.

During late September, before there was any great likelihood of migrants from other breeding grounds, and after all the young were awing, I counted the young and old in several flocks that were resting on the sandbars, and found 156 young to 586 adults, or an increase of 26.6 per cent. This means of course only that this was a probable percentage of increase on the breeding birds up to the end of the season, in what seemed to me a normal year. The yearly increase, or rather replacement, would be affected by the mortality of young and of adults during the rest of the year, and by the proportion of non-breeders that then were absent from the flocks. Possibly these last may be found to be birds too immature for nesting in the first or second summer, a common thing with the larger gulls. But that is not proven, and may be one of the things that banding may yet assist in ascertaining.

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